

CLIENT/SUBJECT _____ W O NO _____

TASK DESCRIPTION _____ TASK NO _____

PREPARED BY _____ DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV BY _____ DEPT _____ DATE _____

APPROVED BY	

DEPT _____	DATE _____

FRP-06-AR-000053

Filed w/ FRP-06-~~AR~~-OK-00001;

00002

NO LONGER PART OF
MULTI-SITE PL PLAN

MAGELLAN NEW OWNER - 5/27/05
MC

9490524





Ft Smith Terminal Spill Response Plan

Developed by

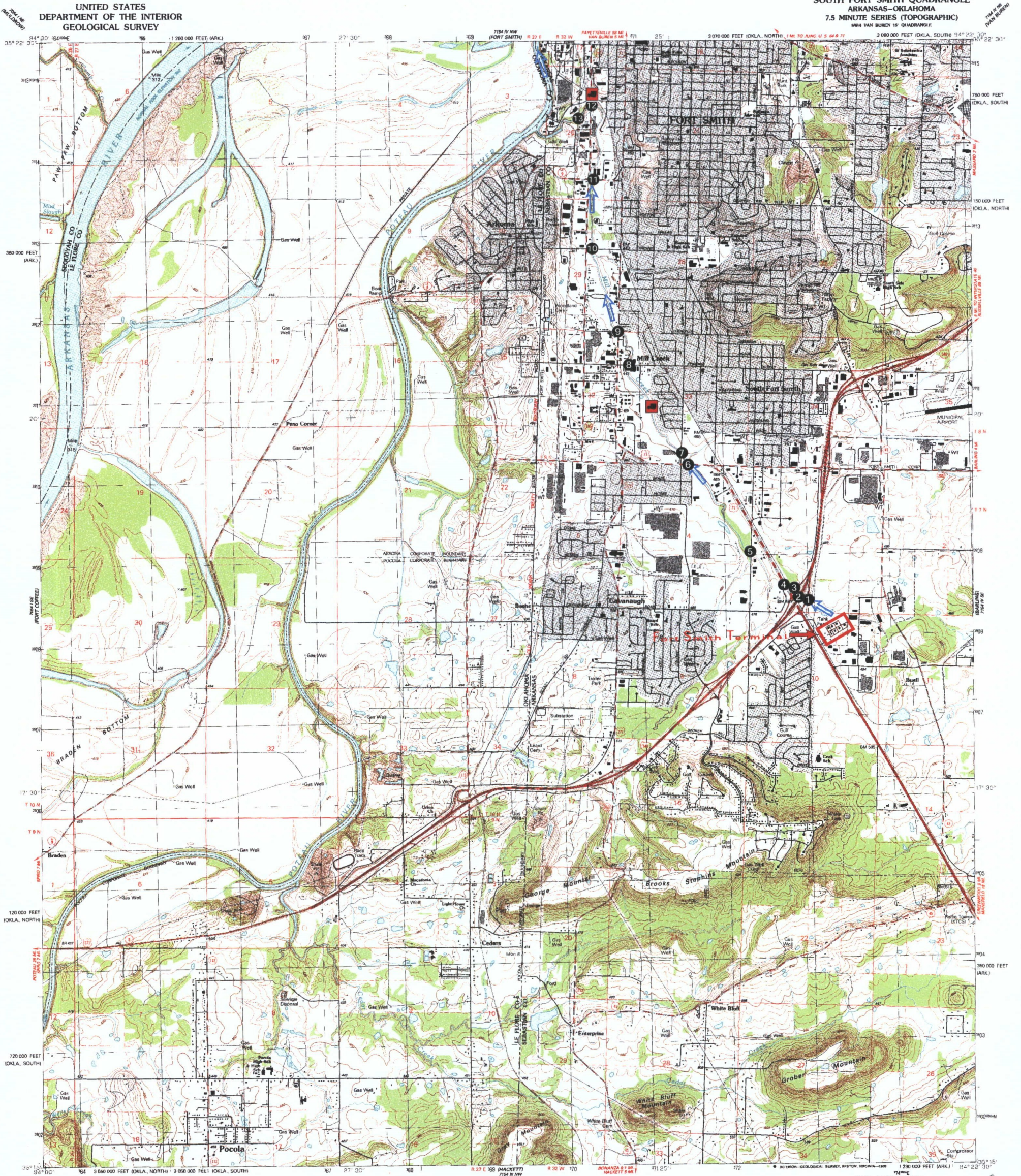


**TECHNICAL RESPONSE PLANNING
CORPORATION**

Fort Smith Terminal Map 1 of 3

SOUTH FORT SMITH QUADRANGLE
ARKANSAS-OKLAHOMA
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 VAN BUREN 15' QUADRANGLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Produced by the United States Geological Survey
Control by USGS and NOS/NOAA

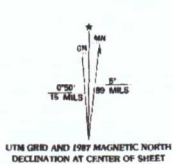
Topography by photogrammetric methods from aerial photographs taken 1983. Field checked 1985. Map edited 1987
Supersedes Army Map Service map dated 1948

Projection and 10,000-foot grid ticks: Oklahoma coordinate system, south and north zones, and Arkansas coordinate system, north zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American Datum

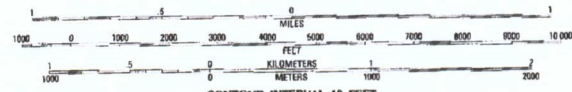
To place on the predicted North American Datum 1983, move the projection lines 6 meters south and 19 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map
Gray tint indicates areas in which only landmark buildings are shown

Gray tint indicates areas in which only landmark buildings are shown



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
AND OKLAHOMA GEOLOGICAL SURVEY, NORMAN, OKLAHOMA 73069
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

 Interstate Route
 U. S. Route
 State Route

SOUTH FORT SMITH, ARK.-OKLA.
SW/4 VAN BUREN 15' QUADRANGLE
35094-C4-TF-024

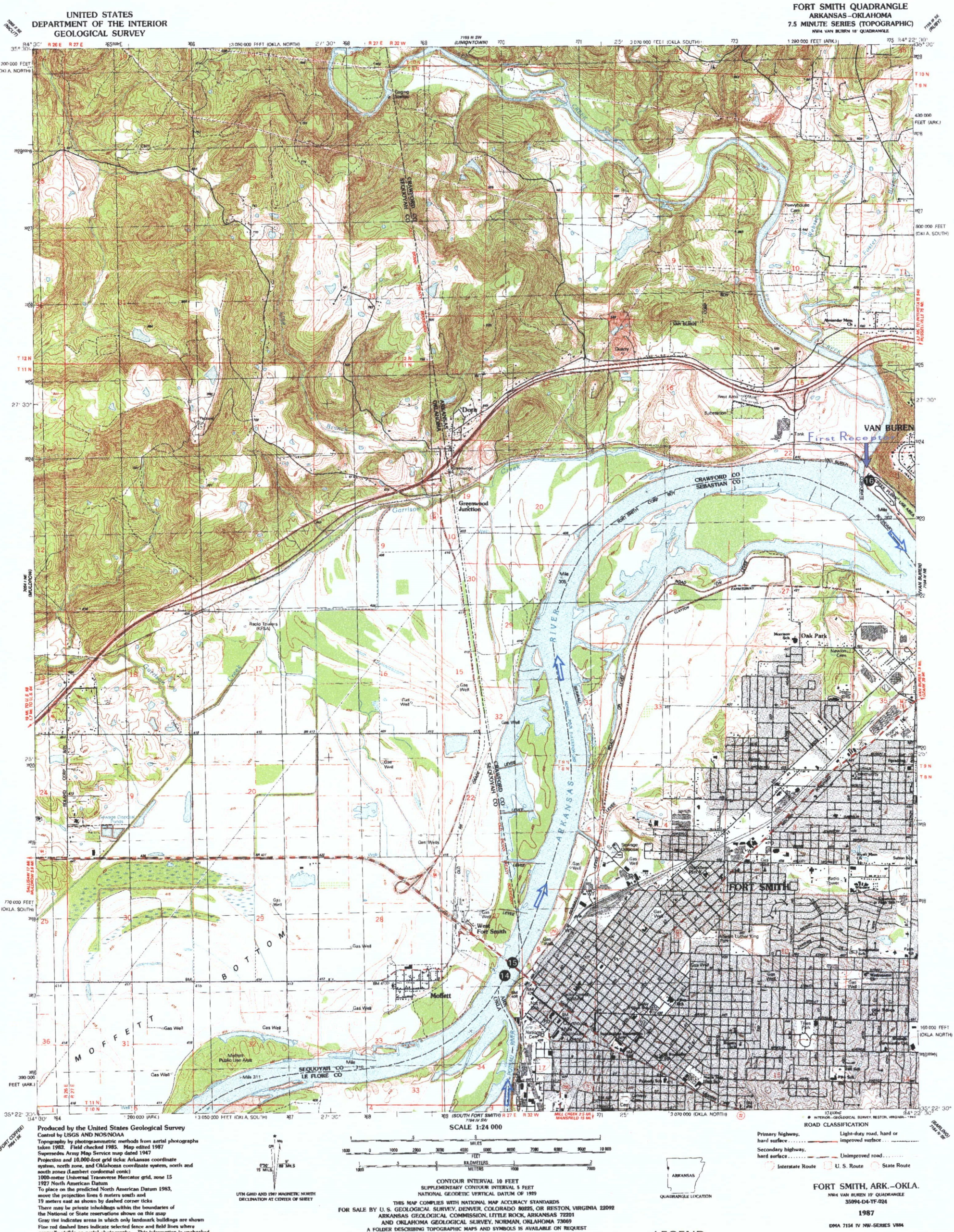
1987

DMA 7154 IV SW-SERIES V883

LEGEND

- | | | | |
|---|---------------------------------|---|------------------------|
|  | Terminal |  | Planning Distance |
|  | First Receptor |  | Flow |
|  | Well Head
Protection
Area |  | Municipal Water Intake |
| | |  | Sensitivities |
| | |  | Tactical Site |

Fort Smith Terminal Map 2 of 3



Fort Smith Terminal Map 3 of 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

VAN BUREN QUADRANGLE
ARKANSAS
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE4 VAN BUREN 15 QUADRANGLE



Produced by the United States Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1983. Field checked 1986. Map edited 1987

Superimposed Army Map Service map dated 1947

Projection and 10,000-foot grid ticks: Arkansas coordinate

system, north zone (Lambert conformal conic)

1000-meter Universal Transverse Mercator grid, zone 15

1927 North American Datum

To place on the predicted North American Datum 1983,

move the projection lines 6 meters south and

18 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of

the National or State reservations shown on this map

Gray tint indicates areas in which only landmark buildings are shown



UTM GRID AND 1987 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



SCALE 1:24 000

CONTOUR INTERVAL 10 FEET

SUPPLEMENTARY CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1989

THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface Light-duty road, hard or improved surface
Secondary highway, hard surface Unimproved road
Interstate Route U. S. Route State Route

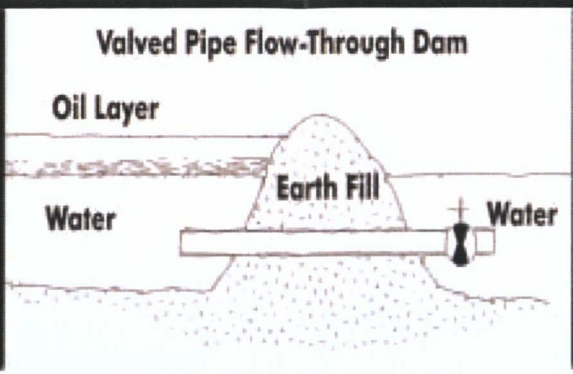
VAN BUREN, ARK.
NE4 VAN BUREN 15 QUADRANGLE
35094-03-TF-024

1987

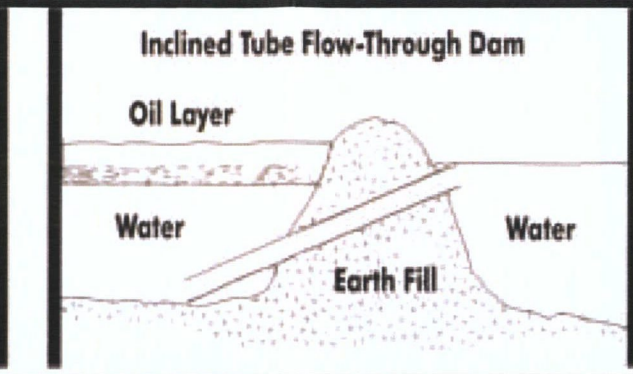
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LEGEND

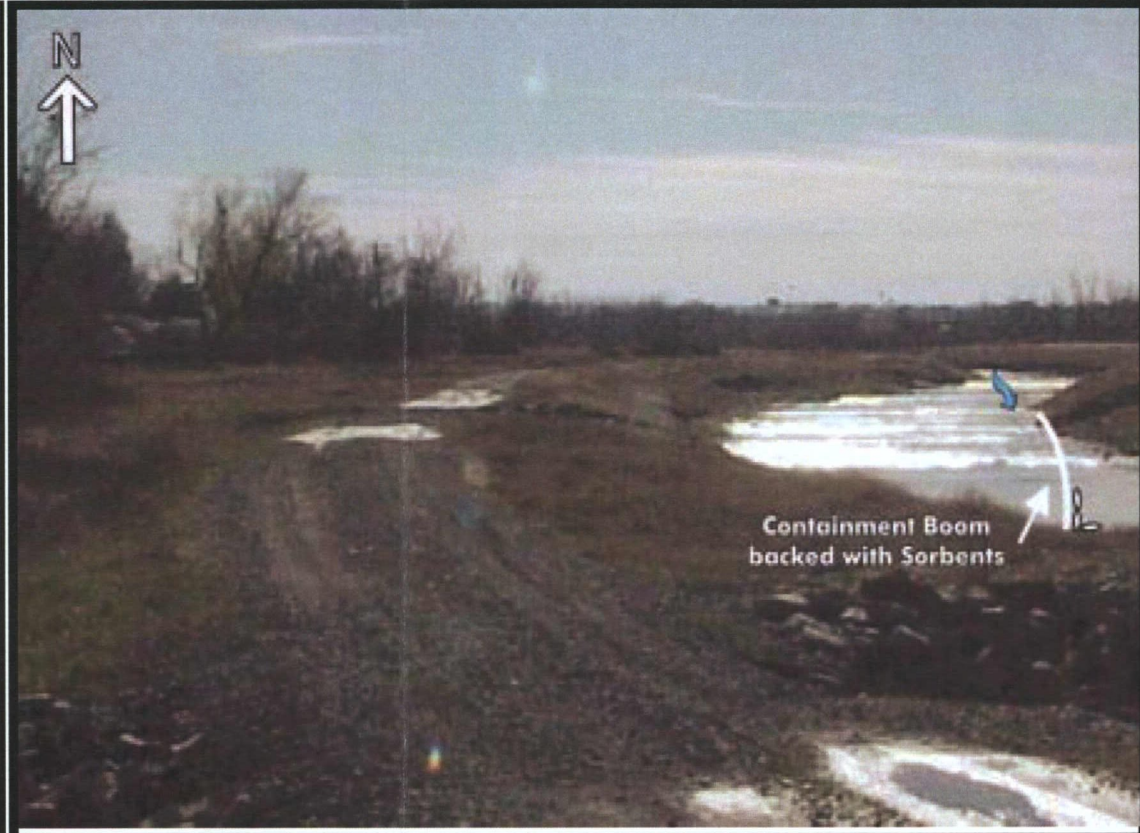
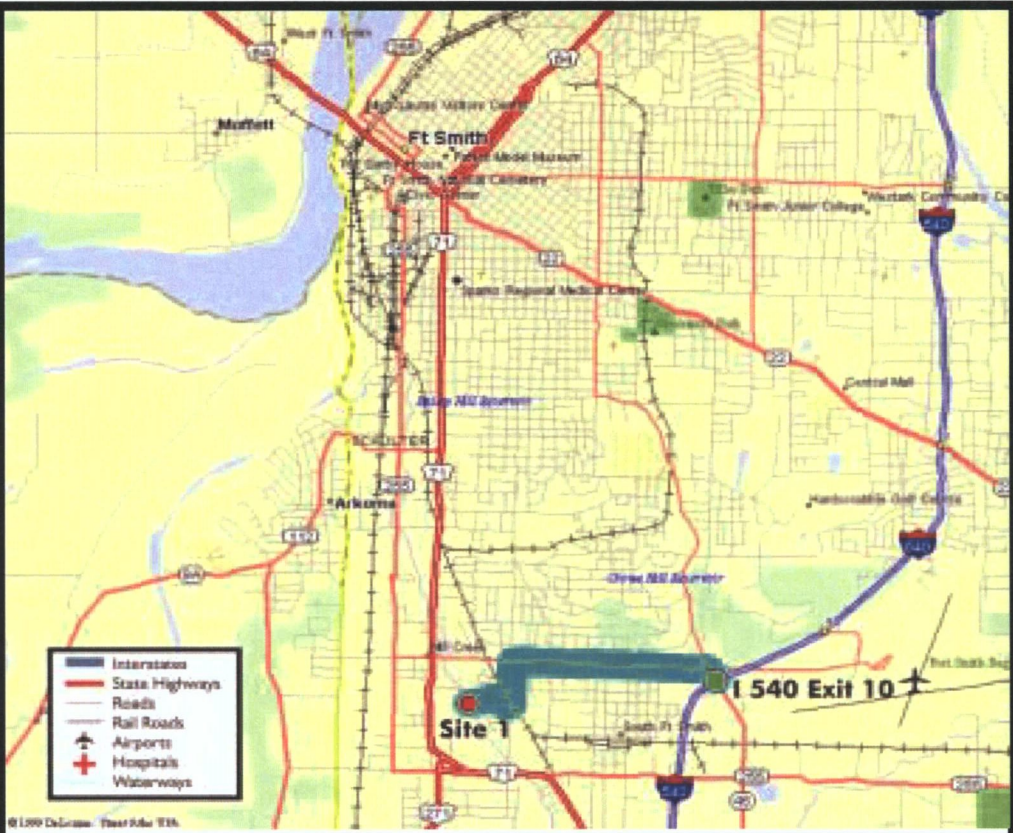
- Terminal
- First Receptor
- Well Head Protection Area
- Planning Distance
- Flow
- Municipal Water Intake
- Sensitivities
- Tactical Site



VALVED PIPE(S)
OF ADEQUATE
CAPACITY TO
BYPASS WATER



WATER FLOW
OR STREAM
IS BYPASSED
TO MAINTAIN
RESERVOIR LEVEL.
ELEVATE DISCHARGE
END OF TUBE(S)
TO DESIRED
RESERVOIR LEVEL.



RESPONSE STRATEGY

Latitude/Longitude: N 35° 20' 05"/ W 94° 25' 07"

Location: Sebastian County, Fort Smith, AR

Water Way: Mill Creek

Owner: TBD

Distance from Spill Source: 3 miles

Map Reference: South Fort Smith

Response Objective: Containment and Recovery

Response Tactic: - Normal Conditions

Utilize trac-hoe to build dam with inclined tubes for continued water flow. Deploy sorbent boom downstream of the dam to capture any free floating product that escapes the dam. Cover the dam and adjoining shore with poly sheeting to prevent soil permeation.

Watercourse Description: Creek, 25 ft wide, mud and rock banks and bottom, 0-2 ft deep, current 0-2 mph.

Description of Worksite: Residential area, multi-lane paved road access, moderate traffic.

Critical Response Information: Air monitoring and PPE per Site Safety Plan.

Date Last Revised: December 2001

LEGEND Origin ● Destination ●

DRIVING DIRECTIONS
From I-540 (Exit 10) to Old Greenwood Rd
North West on Old Greenwood Rd for 0.1 miles to Phoenix St
West on Phoenix St for 0.5 miles to Phoenix Ave
West on Phoenix Ave for 0.8 miles to Jenny Lind Rd
South on Jenny Lind Rd for 0.3 miles to Utica St
West on Utica St for 0.1 miles to Savannah Dr
North on Savannah Dr for 0.1 mile to Tulsa St
West on Tulsa St for 0.1 miles to work site.

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
200 ft	Sorbent Boom
1	Vac Truck(s)
1	Frac Tank(s)
1	Skimmer(s) - (Suction, Weir, Oleophilic)
100ft	3/8" Polypropylene Line
12	Stake(s)
4	Sledge hammer(s)
6 bales	Sorbent pad(s)
2 cases	85 gallon drum liners
2 rolls	Poly Sheeting
4	Metal Culvert Pipes
1	Trac-hoe
4	Shovels
1	Cell Phone(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
3	Portable Radios(s)
1	Light tower(s)
1	Port-o-let(s)

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
1	Supervisor(s)
1	Vac Truck Operator(s)
2	Equipment Operator(s)
4	Laborer(s)



RESPONSE STRATEGY

Latitude/Longitude: N 35° 22' 02" / W 94° 25' 36"

Location: Sebastian County, Fort Smith, AR

Water Way: Mill Creek

Owner: TBD

Distance from Spill Source: 6 miles

Map Reference: South Fort Smith

Response Objective: Containment and Recovery

Response Tactic: - Normal Conditions

Deploy segments of containment boom across Mill Creek using shoreline anchoring technique to divert product to the left descending bank, where skimming operations can be performed. Deploy containment boom backed with sorbent boom downstream of collection point as backup boom.

LEGEND Origin ● Destination ●

DRIVING DIRECTIONS

From I-540 (Exit 8) to SR 22 (Rogers Ave) :

North West on SR 22 (Rogers Ave) for 3.5 miles to S 14th St

West on S 14th St for 0.1 miles to S A St

West on S A St for 0.4 miles to SR 255 (Wheeler Ave)

South on SR 255 (Wheeler Ave) for 1.1 miles to work site.

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
100 ft	Containment Boom
200 ft	Sorbent Boom
1	Vac Truck(s)
1	Frac Tank(s)
1	Work Boat(s)
1	Skimmer(s) - (Suction, Weir, Oleophilic)
200 ft	3/8" Polypropylene Line
8	Stake(s)
2	Sledge hammer(s)
6 bales	Sorbent pad(s)
3 case	85 gallon drum liners
3 rolls	Poly Sheeting
1	Cell Phone(s)
2	Portable Radios(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
1	Light tower(s)
2	Port-o-let(s)

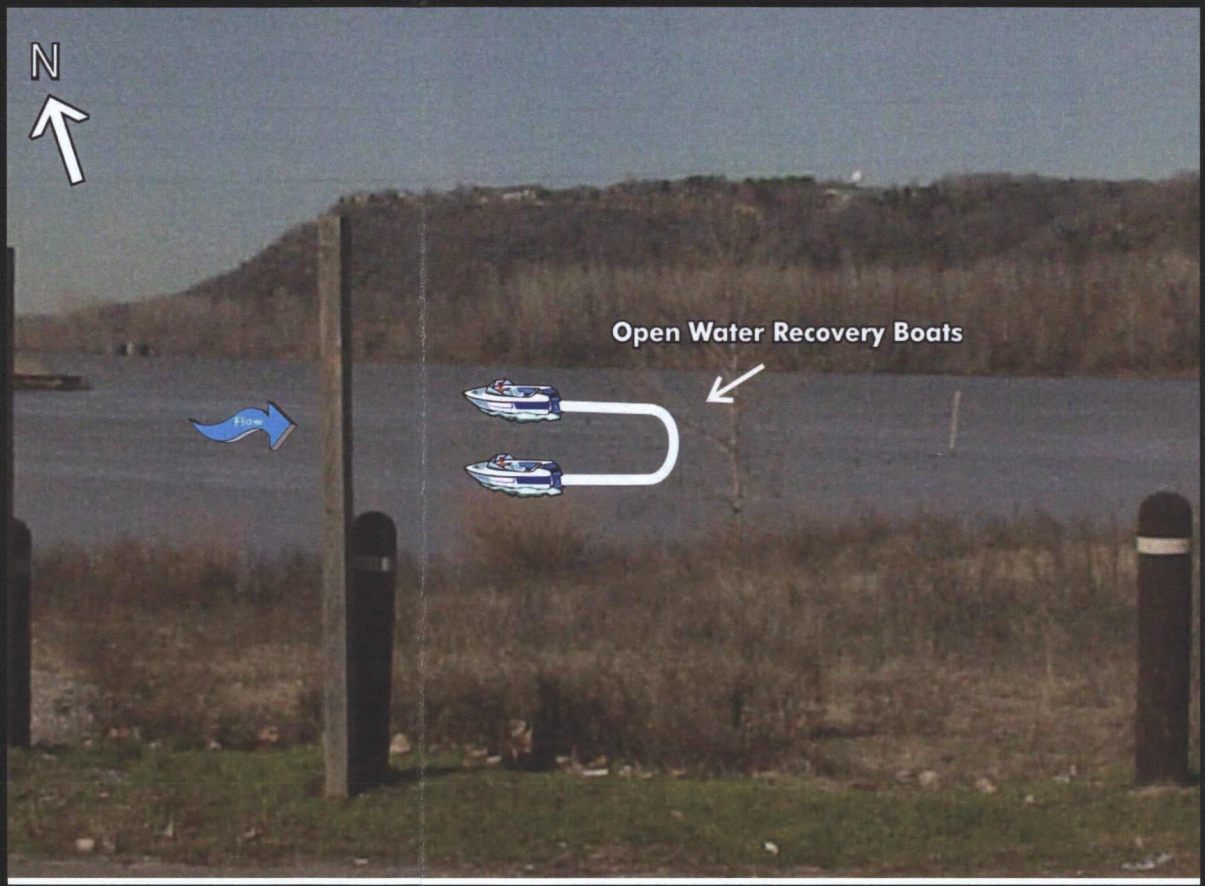
RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
1	Supervisor(s)
1	Vac Truck Operator(s)
1	Boat Operator(s)
4	Laborer(s)

Watercourse Description: Creek, 25 ft wide, mud and rock banks and bottom, 0-2 ft deep, current 0-2 mph.

Description of Worksite: Industrial area, multi-lane paved road access, heavy traffic.

Critical Response Information: Air monitoring and PPE per Site Safety Plan.

Date Last Revised: December 2001



RESPONSE STRATEGY

Latitude/Longitude: N 35° 25' 52"/ W 94° 22' 12"

Location: Sebastian County, Fort Smith, AR

Water Way: Arkansas River

Owner: TBD

Distance from Spill Source: 12-15 miles

Map Reference: Van Baren

Response Objective: Containment and Recovery

Response Tactic: - Normal Conditions

Utilize open water recovery techniques. Deploy two crews, each with two boats and 350 ft of containment boom to protect Arkansas River. Prepare crews on shore to recover incoming product. Conduct aerial observation to update crews on movement of product.

LEGEND Origin ● Destination ●

DRIVING DIRECTIONS

From I-540 (Exit 5) to SR 59 (Fayetteville Rd) :

South on SR 59 (Fayetteville Rd) for 2.3 miles to US 64

South West on US 64 for 0.9 miles to Clayton Expy (SR 255)

North West on Clayton Expy (SR 255) for 0.5 miles to work site.

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
1000 ft	Containment Boom
1	Vac Truck(s)
1	Frac Tank(s)
4	Work Boat(s)
1	Skimmer(s) - (Suction, Weir, Oleophilic)
12 bales	Sorbent pad(s)
2 cases	85 gallon drum liners
1	Cell Phone(s)
6	Portable Radios(s)
1	Light tower(s)
3	Port-o-let(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
1	Supervisor(s)
1	Vac Truck Operator(s)
4	Boat Operator(s)
8	Laborer(s)

Watercourse Description: River, 3600 - 4500 ft wide, mud and rock banks and bottom, 10-30 ft deep, current >5 mph.

Description of Worksite: Rural area, multi-lane paved road access, moderate traffic.

Critical Response Information: Air monitoring and PPE per Site Safety Plan.

Date Last Revised: December 2001

FIGURE C-4 - POTENTIAL SPILL SOURCES

Container/ Source	Major Type of Failure	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS - Total: 19,668,006								
1445	Leak/Failure	844,080	2,326,800 gal/1	C/F/W	1954	565,534	Instantaneous	Distillate
1446	Leak/Failure	12,655,650	1,554,000 gal/1	C/F/W	1954	8,479,286	Instantaneous	Gasoline
1447	Leak/Failure	1,265,300	1,549,800 gal/1	C/F/W	1954	847,751	Instantaneous	Distillate
1448	Leak/Failure	1,370,880	1,625,400 gal/1	C/F/W	1966	918,490	Instantaneous	Gasoline
1449	Leak/Failure	1,371,180	1,726,200 gal/1	C/F/W	1966	918,691	Instantaneous	Gasoline
1450	Leak/Failure	1,263,570	1,890,000 gal/1	C/F/W	1978	846,592	Instantaneous	Gasoline
345	Leak/Failure	42,336	*	C/F/W	1954	27,510	Instantaneous	Contact Water
537	Leak/Failure	427,400	806,400 gal/1	C/FX/W	1954	286,358	Instantaneous	Distillate
538	Leak/Failure	427,310	806,400 gal/1	C/FX/W	1954	286,298	Instantaneous	Distillate
Diesel	Leak/Failure	150	18,984 gal/2	H/FX/W	2000	137	Instantaneous	Distillate
Gasoline	Leak/Failure	150	18,984 gal/2	H/FX/W	2000	137	Instantaneous	Gasoline
ADDITIVE CONTAINERS - Total: 28,250								
377-100	Leak/Failure	6,000	18,984 gal/2	H/FX/W	-	3,900	Instantaneous	Additive
377-110	Leak/Failure	6,000	18,984 gal/2	H/FX/W	-	3,900	Instantaneous	Additive
377-120	Leak/Failure	2,000	18,984 gal/2	V/FX/W	-	1,300	Instantaneous	Additive
377-130	Leak/Failure	12,000	18,984 gal/2	H/FX/W	-	7,800	Instantaneous	Additive
377-133	Leak/Failure	250	18,984 gal/2	H/FX/W	-	200	Instantaneous	Additive
377-134	Leak/Failure	2,000	18,984 gal/2	H/FX/W	-	1,300	Instantaneous	Additive
BURIED METALLIC STORAGE TANKS - Total: 4,998								
Oil/Water Separator	Leak/Failure	4,998	4,998 gal/5	H/FX/W	1997	3,249	Instantaneous	Water
DRUM STORAGE AREA - Total: 550								
Drum Storage	Leak/Failure	550	4,352 gal/2	N/A	-	220	Instantaneous	Varies
MISCELLANEOUS - Total: 10,000								
Terminal Piping	Corrosion	Varies	See Plot Plan	N/A	1954	N/A	Instantaneous	Varies

Note: There are no underground storage tanks or surface impoundments located at this Facility.

* Not in Containment Area ** Curbing and containment system

Containment Type: 1-Earthern Berm and Floor, 2-Concrete Berm and Floor, 3-Metal Berm and Floor, 4-Portable Containment or Inside Building, 5-Double Walled

Tank / Roof Type: C = Conical or Cone, D = Dome, H = Horizontal, L = Lifter, S = Spheroid, V = Vertical, G = Geodesic, Fx = Fixed, F = Floating, W = Welded, R = Riveted

FIGURE C-4 - POTENTIAL SPILL SOURCES , CONTINUED

Container/ Source	Major Type of Failure	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
MISCELLANEOUS - Total: 10,000								
Truck Rack	Overfill	9,000	47,334 gal/**	N/A	1954	N/A	Instantaneous	Varies
Prover	Leak/Failure	1,000	1,700/*	V/FX/W	-	Varies	Instantaneous	Gasoline
Facility Total: 19,711,804								

Note: There are no underground storage tanks or surface impoundments located at this Facility.

* Not in Containment Area ** Curbing and containment system

Containment Type: 1-Earthen Berm and Floor, 2-Concrete Berm and Floor, 3-Metal Berm and Floor,
4-Portable Containment or Inside Building, 5-Double Walled

Tank / Roof Type: C =Conical or Cone, D = Dome, H = Horizontal, L = Lifter, S = Spheroid, V = Vertical,
G = Geodesic, Fx = Fixed, F = Floating, W = Welded, R = Riveted

FIGURE D.4-2 - PLANNING DISTANCE CALCULATIONS

The total planning distance equals d.

	Ft. Smith Terminal - Arkansas River
First receptor	Lee Creek Public Use Area
First receptor location (miles)	14.29 miles
∞ (feet)	1 foot
$_{-}$ (miles)	6.99
s (feet/mile)	2.71×10^{-3}
Avg. mid-channel depth (feet)	13 feet
r (feet)	8.671
n	0.036
v (feet/second)	0.915
t (hours)	20
c (seconds per mile/hours per foot)	0.68
d (total planning distance)	12.45

	Ft. Smith Terminal - Mill Creek
First receptor	N/A
First receptor location (miles)	20 miles
∞ (feet)	100 feet
$_{-}$ (miles)	7.3
s (feet/mile)	2.59×10^{-3}
Avg. mid-channel depth (feet)	1.5 feet
r (feet)	1.005
n	0.05
v (feet/second)	1.53
t (hours)	7
c (seconds per mile/hours per foot)	0.68
d (total planning distance)	7.30